
WASTE DISCHARGE REQUIREMENT PERMIT APPLICATION MIDDLE HARBOR REDEVELOPMENT

Submitted to

Los Angeles Regional Water Quality Control Board

Submitted by

Port of Long Beach

Environmental Planning



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LIST OF ACRNYMS AND ABBREVIATIONS

BMP	best management practice
CAAP	Clean Air Action Plan
CWA	Clean Water Act
Cy	Cubic yard
DTSC	Department of Toxic Substances Control
ERL	effects range low
ERM	effects range median
mg/L	milligram per liter
MLLW	mean lower low water
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
Port	Port of Long Beach
Project	Middle Harbor Redevelopment Project
RIA	Regional Implementation Agreement
RWQCB	Regional Water Quality Control Board
STLC	soluble threshold limit concentration
TEH	total extractable hydrocarbon
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
WDR	Waste Discharge Requirement
Weston	Weston Solutions Inc.
WQC	Water Quality Certification

1 PROJECT SUMMARY

In April of 2010, the Port of Long Beach (Port) will begin construction of the Middle Harbor Redevelopment Project (Project), which includes the expansion and modernization of existing marine terminals and other Port land and water areas to accommodate a portion of the forecasted increase in containerized cargo. The Project comprises a number of activities at existing terminal facilities within the Middle Harbor area (Figures 1 and 2), including consolidating terminals on Piers E and F; repairing and modernizing Port facilities; implementing Green Port policies and the Clean Air Action Plan (CAAP); improving terminal traffic flow and cargo handling operations; and increasing intermodal railyard facilities. The Project is estimated to take 10 years and will be completed in two phases, each with multiple stages. The construction elements that are relevant to water quality include: 1) dredging, 2) demolition, construction, and excavation along existing wharfs, 3) construction of rock containment dikes, and 4) fill of Slip 1 and the East Basin to create new land (Figure 3).

The Port recognizes the Project has the ability to benefit the region by accepting and beneficially reusing dredged material. The Port is developing a Middle Harbor Sediment Management Plan detailing the Port's decision process for acceptance of material for fill. The Sediment Management Plan (outline is provided in the appendix) details logistical, technical, and legal requirements. Components of the plan that are relevant to water quality have been provided in this document.

The Port has structured this request for Clean Water Act (CWA) Section 401 Water Quality Certification/Porter-Cologne Waste Discharge Requirements (WQC/WDR) according to the various activities that each category of construction will entail. By structuring around activities, a consistent set of conditions can be applied to all activities within each category. The Port believes this approach has advantages over the case-by-case structure used in the past, as it will streamline controlling, monitoring, and reporting on this large construction process.

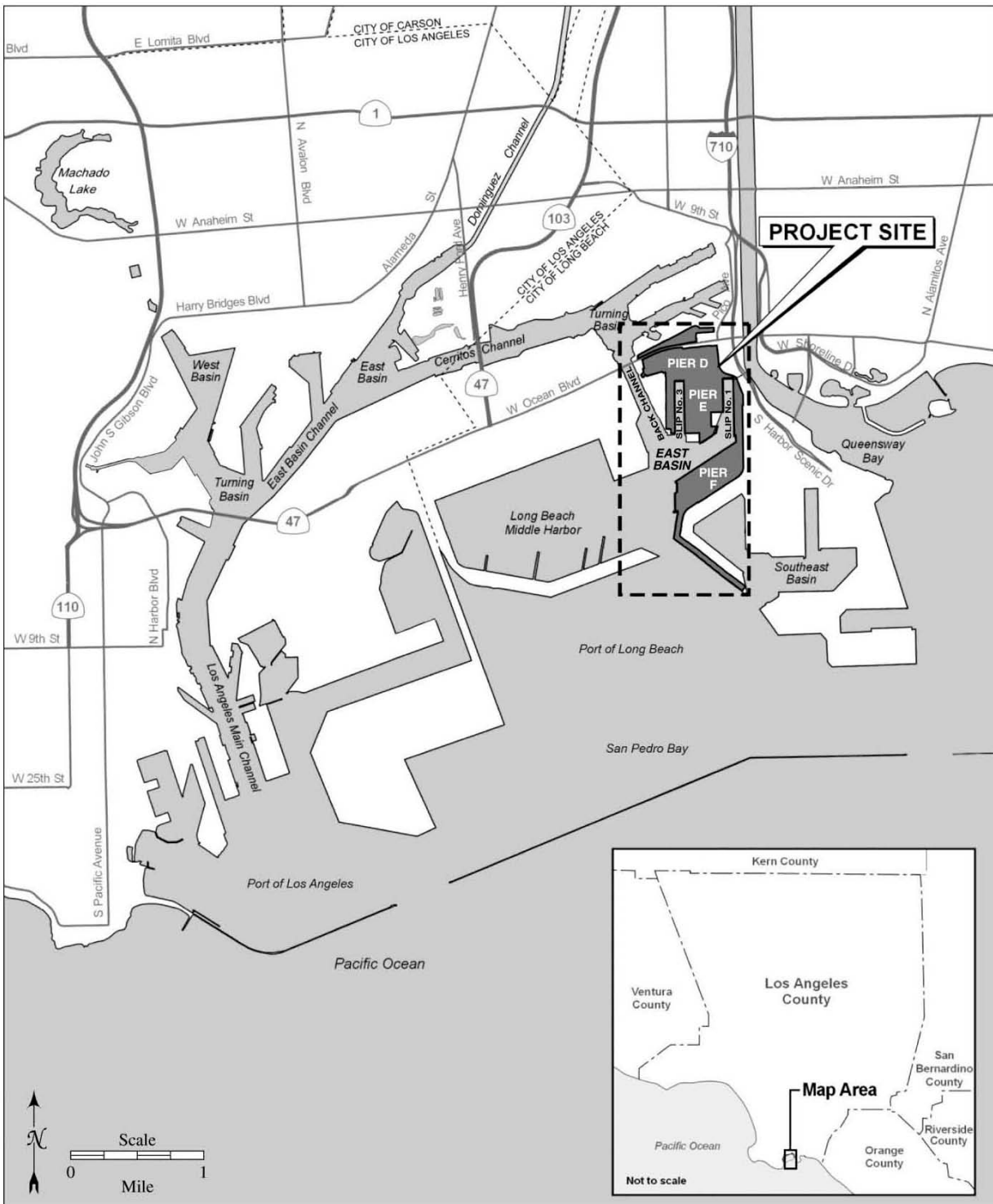
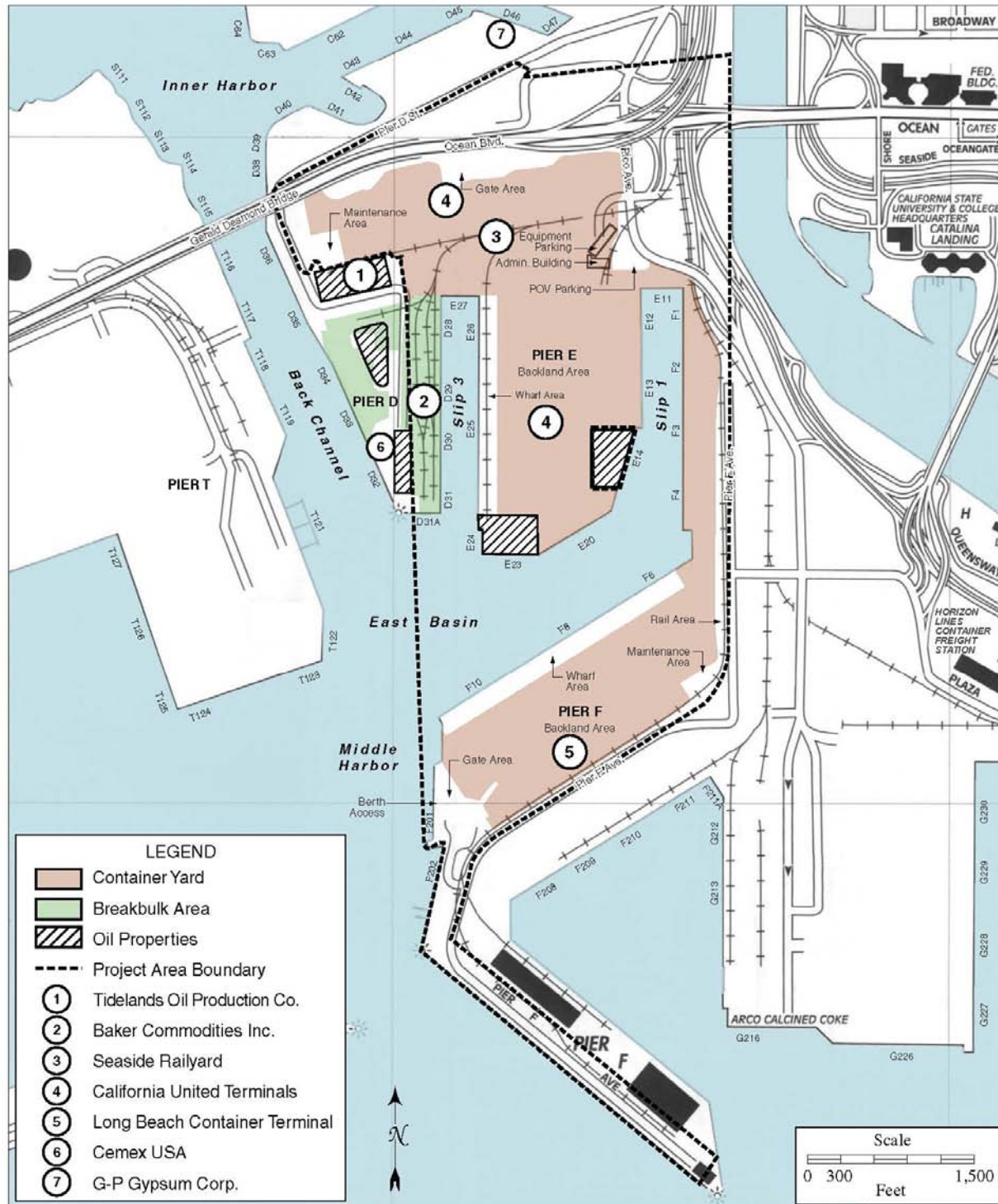


Figure 1
Site Location



Source: Moffatt & Nichol 2006

Figure 2
Existing Conditions

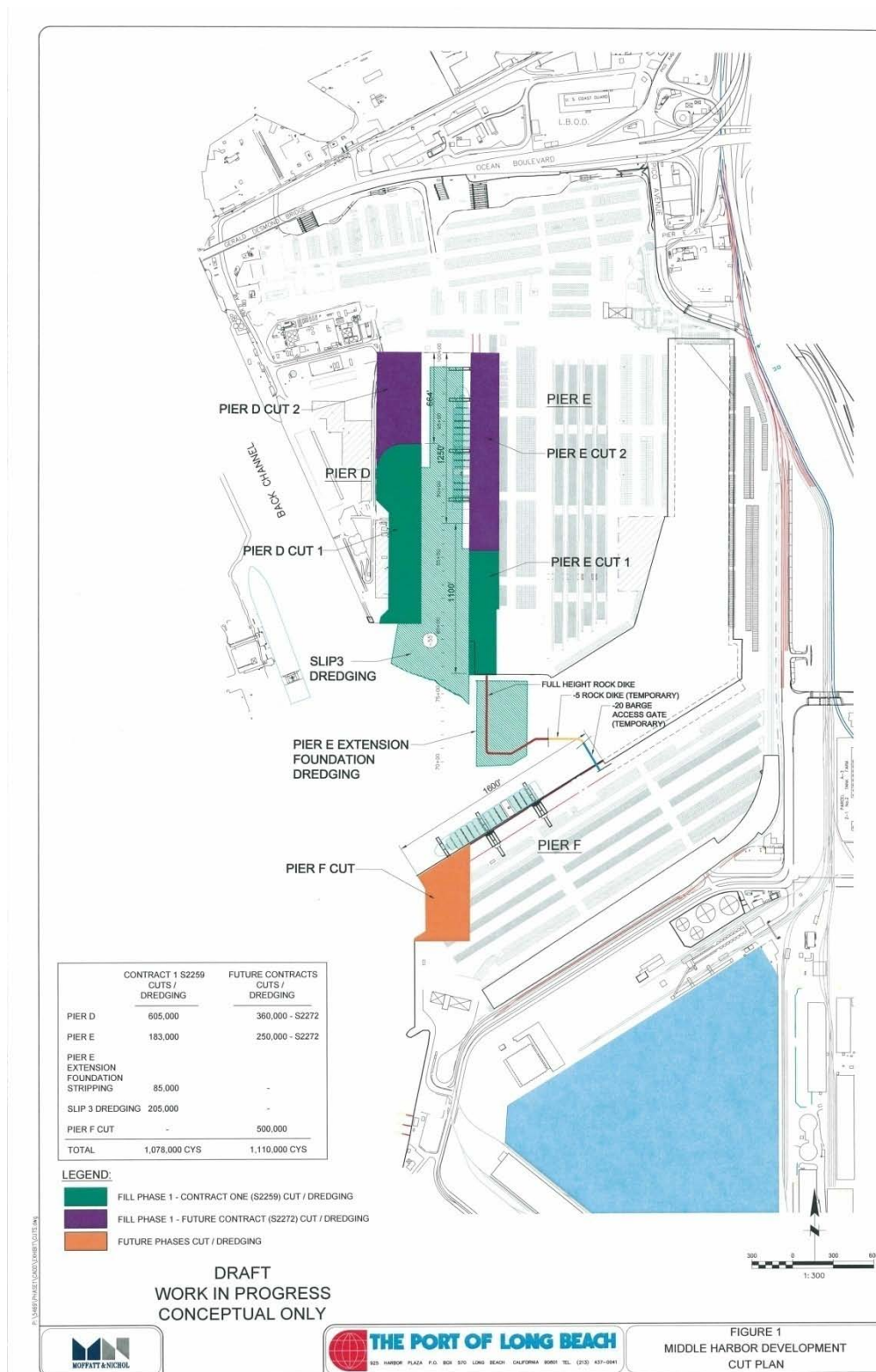


Figure 3
Construction Elements

2 DESCRIPTION OF ACTIVITIES

2.1 Dredging

The primary dredge footprint is within Slip 3, which lies between Piers D and E in the Middle Harbor (Figure 2). Slip 3 runs north-south and is approximately 2,500 feet in length and approximately 350 feet across. Slip 3 will be widened by 117 feet and deepened to -55 feet as to accommodate deep-draft cargo ships that require sufficient width to maneuver safely up to and away from berths. Minor dredging will occur in Slip 1 and the East Basin to prepare the sites of the landfill containment dikes. The Project is estimated to generate approximately 280,000 cubic yards (cy) of dredged material, including bulking factors. Material generated from dredging activities will be beneficially used as fill for Slip 1 and the East Basin (see Section 2.4), an extension of Pier E, and as fill on existing low-lying land.

Most of the dredged material will be generated through the deepening of Slip 3, where the existing depths, ranging from -36 to -54 feet MLLW, will be dredged to -55 feet MLLW with 1 foot paid and 1 foot unpaid overdredge depth (-57 feet MLLW).

The material to be dredged was evaluated both for its potential suitability for use as fill material and for its chemical nature by Weston Solutions, Inc. (Weston; Weston 2006). The evaluation was based on applicable criteria outlined in the Regional Implementation Agreement (RIA; U.S. Environmental Protection Agency [USEPA] Region IX/Los Angeles District of the U.S. Army Corps of Engineers [USACE] 1993) and Title 22 of the California Code of Regulations for the classification for hazardous material. The dredge footprint was divided into two sampling areas (Area PE 1 and Area PE 2), each containing six different sediment core locations, respectively.

Based on 2006 bathymetry, the proposed deepening of Slip 3 consists of dredging approximately 111,000 cy of material from Area PE 1 and 105,000 cy from Area PE 2 to a design depth of -55 feet MLLW, for a total dredged material volume of 216,000 cy (Table 1). With a 2-foot overdredge allowance, the potential dredged material to be removed is approximately 143,000 cy of material from Area PE 1 and 140,000 cy from Area PE 2 for a total dredged material volume of 283,000 cy.

Table 1
Approximate Dredge Volumes of Material to be Removed from
Slip 3, Port of Long Beach

Area	Dredge Volume (cy) (-55 ft)	Dredge Volume (cy) (-55 ft + 2 ft overdredge)
PE 1	111,000	143,000
PE 2	105,00	140,000
Total	216,000	283,000

Notes:

Recreated from Weston 2006

According to the Weston (2006) data (Table 2 below), the chemical concentrations in the sediment and sediment elutriates collected from Slip 3 indicate that this material is not hazardous waste and is thus acceptable for use as fill in the Project. Weston's data show that:

- The top layers of sediment from Areas PE 1 and PE 2 are comprised largely of clay and silt (86 and 61 percent fine-grained materials, respectively); the bottom layers have high proportions of sand and gravel (48 and 67 percent coarse-grained materials, respectively).
- In the top layers of Slip 3 sediments, several constituents were present at concentrations exceeding effects range low (ERL) levels (metals, DDTs, total polychlorinated biphenyls [PCBs], and polycyclic aromatic hydrocarbons [PAHs]). All of those constituents, however, were below effects range median (ERM) values. Other chemicals analyzed were found at concentrations below ERL levels. No phenols and no chlorinated pesticides, except DDT derivatives, were detected, and organotins were detected below concentrations shown to cause toxicity to aquatic organisms.
- In the bottom layers of sediment, organochlorine pesticides and organotins were below the detection limits, and no other chemicals (metals, PCBs, and PAHs) exceeded ERL values.
- Concentrations of all chemicals analyzed in sediment elutriates were below the daily maximum limiting concentrations and water quality objectives of the California Ocean Plan.

Table 2
Summary of Sediments Collected from Slip 3

Analyte	ERL	ERM	TTL	Composite Range
Physical Analyses (%)				
Gravel	-	-	-	0.003 – 6.56
Sand	-	-	-	12.4 – 66.7
Silt	-	-	-	27.4 – 57.8
Clay	-	-	-	5.91 – 28.3
Solids, Total	-	-	-	66.3 – 74.6
Chemical Analyses (mg/kg)				
Arsenic (As)	8.2	70	500	3.7 – 10.6
Cadmium (Cd)	1.2	9.6	1200	0.08 – 0.77
Chromium (Cr)	81	370	-	17.9 – 44.3
Copper (Cu)	34	270	2500	19.4 – 63.8
Lead (Pb)	46.7	218	1000	5.04 – 38.1
Mercury (Hg)	0.15	0.71	20	0.06 – 0.31
Nickel (Ni)	20.9	51.6	2000	14.7 – 25.3
Selenium (Se)	-	-	100	<0.025 – 0.48
Silver (Ag)	1	3.7	500	<0.025 – 0.15
Zinc (Zn)	150	410	5000	45.1 – 118
Organics (µg/kg)				
4,4'-DDD	2	20	1000	<1 – 2.3J
4,4'-DDE	2.2	27	1000	<1 – 15
4'4' DDT	1.0	7.0	1000	<1
Total Detectable DDTs	1.6	46.1		0 – 22.9
Total PCB	22.7	180	50000	0 – 47.1
Total PAH	4022	44792	-	171.4 – 4235.4
Total Detectable Chlordane	0.5	6	2500	0

Notes:

All values in dry weight except where noted.

BOLD = The measured concentration exceeds the analyte's respective ERL value.

BOLD and Underlined = The measured concentration exceeds the analyte's respective ERM value.

< = Below the method detection limit indicated.

J = Analyte detected at a concentration below the reporting limit and above the method detection limit; value is estimated.

HMW PAHs = high molecular weight PAHs

LMW PAHs = low molecular weight PAHs

Table summarized from Weston 2006.

Dredging is not expected to result in any long-term or significant impacts to water quality. Sediment sampling results indicate that although some contaminants of concern are present at concentrations above ERLs, those concentrations are well below ERMs. Only copper and p'p DDT exceed ERMs, in one and four samples, respectively. Short-term impacts to water quality could occur via temporary increases in turbidity during dredging, but turbidity would be expected to dissipate rapidly following project activities, and best management practices (BMPs) would be employed to control turbidity, as described in Section 3.

In order to ensure project impacts are minimized to the maximum extent practicable, BMPs will be utilized during dredging where appropriate (see Section 3). In addition, a project specific water quality monitoring plan will be prepared, that will describe the methods and documentation that the Port will employ for the monitoring of turbidity, pH, dissolved oxygen, and, as necessary, chemical constituents during dredging.

2.2 Wharf Demolition/Construction

2.2.1 Description of Activities

The existing wharf structures (e.g., concrete pilings, sheet pile and concrete retaining structures, and rock dikes) at Berths D29 to D31, E12 to E13, and E23 to E27 (Figures 2 and 3) will be demolished as one of the first steps in the construction process. Approximately 1,500,000 cy of material (1,000,000 cy from D29 to D31, E12 to E13, E23 to E24, 250,000 cy from E25, and 250,000 cy from E26) will be excavated from existing Berths D29 through D31 and E24 through E26 to widen Slip 3 by approximately 117 feet and deepen the slip to -55 feet mean lower low water (MLLW; -57 feet including the 2-foot allowance for overdredge). In order to remove a small land area needed for the final wharf configuration (Figure 2), additional demolition and dredging would occur at Berth F210 late in the Project,

Construction of the new wharves, re-construction of new shorelines, and improvements to portions of existing wharves will include placement of quarry-run rock dikes with armor rock revetments or armor stone (see Section 2.4); installation of concrete piles, 4,200 lineal feet of steel-reinforced concrete wharf deck, sheet piles, tiebacks, anchors; and installation of shore-to-ship infrastructure. At specific stages of construction, temporary pile-supported mooring dolphins will be installed to handle waterborne construction equipment.

Demolition and construction activities are not anticipated to cause any long-term impacts to water quality. Permit-required monitoring of previous in-water construction projects has shown that substantial resuspension and dispersal of sediments does not occur (USACE/POLB 2009). Short-term, less-than-significant impacts may occur due to increases in turbidity or the presence of debris at the project site; however, BMPs will be implemented as appropriate to ensure that any impacts are negligible. Potential BMPs that may be implemented are described in Section 3.

Activities associated with the installation of shore-to-ship infrastructure, wharf deck, anchors, and tiebacks, as well as the removal and replacement of concrete caps, will be primarily confined to upland areas, and past experience has shown that releases of contaminants to nearby waterbodies are rare (USACE/POLB 2009). Accordingly, those activities would not be expected to have adverse effects on water quality.

2.2.2 Characterization of Material Within the Area of Slip 3 to be Widened

Excavated and dredged material that will be generated through the widening of Slip 3 was evaluated for its potential suitability for use as fill material in Slip 1 by Pacific Edge Engineering, Inc. (Pacific Edge 2006). Based on design specifications, the proposed expansion of Slip 3 consists of excavating and dredging approximately 1,500,000 cy of material. Pacific Edge collected and logged 45 continuous soil cores to various depths within the proposed widening area (Figure 3). Chemical results are summarized in Table 3.

Table 3
Summary of Soil Samples Collected from Pier D and E, Port of Long Beach

Analyte	ERL	ERM	TTLC	Composite Range
Metals (mg/kg)				
Arsenic (As)	8.2	70	500	3.7 – 5.53
Cadmium (Cd)	1.2	9.6	1200	0.08 – <0.05
Chromium (Cr)	81	370	-	17.9 - 34.8
Copper (Cu)	34	270	2500	19.4 – 1600
Lead (Pb)	46.7	218	1000	5.04 – 41.8
Mercury (Hg)	0.15	0.71	20	0.06 – 0.3
Nickel (Ni)	20.9	51.6	2000	14.7 – 21.4
Selenium (Se)	-	-	100	<0.025 – 1.13

Table 3
Summary of Soil Samples Collected from Pier D and E, Port of Long Beach

Analyte	ERL	ERM	TTLC	Composite Range
Silver (Ag)	1	3.7	500	<0.025 – 0.73
Zinc (Zn)	150	410	5000	45.1 – 102.0
Organics (µg/kg)				
4,4'-DDD	2	20	1000	<1 – 1.94J
4,4'-DDE	2.2	27	1000	<1 – 4.48
4'4' DDT	1.0	7.0	1000	<1 – 36.1
Total Detectable DDTs	1.6	46.1		0 – 42.52
Total PCB	22.7	180	50000	0 – <4.2
Total PAH	4022	44792	-	ND – 4926.5
Total Detectable Chlordane	0.5	6	2500	0 - <0.62

Notes:

All values in dry weight except where noted.

BOLD = The measured concentration exceeds the analyte's respective ERL value.

BOLD and Underlined = The measured concentration exceeds the analyte's respective ERM value.

< = Below the method detection limit indicated.

J = Analyte detected at a concentration below the reporting limit and above the method detection limit; value is estimated.

HMW PAHs = high molecular weight PAHs

LMW PAHs = low molecular weight PAHs

Table summarized from Pacific Edge (2006).

Soils were analyzed for metals, total extractable hydrocarbons (TEH), volatile organic compounds (VOCs), organochlorine pesticides, PCBs, and PAHs, and compared to relevant sediment quality and hazardous waste guidelines. Three representative elutriate samples were prepared and evaluated for the presence of TEH, organochlorine pesticides, PCBs, metals, and PAHs for comparison to the California Ocean Plan.

The soil evaluation indicates that this material is suitable for use as fill in the Project. A summary of the findings is included in Table 3 and below:

- Boring logs indicate that soils are composed of a mixture of asphalt, gravel, fine to medium sand, and silt.
- Chemical concentrations in soil samples exceeded one or more ERL values for metals, organochlorine pesticides, and PAHs. All chemicals measured in sediment samples were below ERM values, except copper exceeded the ERM and soluble threshold limit concentration (STLC) values in one sample and p'p-DDT exceeded the ERM value in

four samples.

- Concentrations of all chemicals analyzed in the soil were below state and federal hazardous waste criteria.
- Concentrations of all chemicals analyzed in the elutriate samples were below the daily maximum limiting concentrations or water quality objectives of the California Ocean Plan.

2.3 Rock Dike Construction

During the first phase of construction, rock will be placed in Slip 3 to support the new wharves and placed in Slip 1 and the East Basin to create two containment dikes (Figure 3). New dikes will consist of quarry-run rock with armor-rock revetments. One rock dike will be constructed in Slip 1 for a truck access wedge fill, and a containment dike will be constructed in the East Basin and at the southern boundary of Slip 1 to prevent the movement of newly placed material and contain the final fill.

The rock-containment dikes will prevent placed material from escaping into the harbor during fill operations (see Section 2.4). There will be no long-term or significant impacts to water quality as a result of rock placement. Short-term increases in turbidity may occur following the placement of rock; however, because BMPs will be employed where appropriate during this portion of the project. Any turbidity would be localized and short term.

2.4 Filling of Slip 1 and the East Basin

The Project fills will create approximately 65 acres of new land and require approximately 4,800,000 cy of fill material. Fill activities will include placement of material dredged excavated from Pier D, Pier E, Slip 1, the East Basin, and Slip 3 during the first phase of construction (as described above) and the placement of additional material imported from outside the Project (as described in Sections 2.4.1 and 2.5) and from the demolition of land at Berth F210.

2.4.1 Nature of Material Considered for Fill

The material to be used as fill must meet minimum chemical criteria and have certain structural characteristics, depending upon its destination in the fill. The Port will *NOT* accept material that: 1) constitutes “hazardous waste” as termed by the USEPA or the California Department of Toxic Substances Control (DTSC); 2) is deemed unsuitable for confined aquatic disposal by the USEPA; or 3) has land use restrictions or other long-term operations and maintenance requirements imposed by California DTSC or other regulatory agency. Therefore, contaminated sediments from river and harbor dredging are, in general, chemically acceptable, but very heavily contaminated sediments that would be subject to long-term monitoring and land-use restrictions once it is placed in a disposal facility would not be acceptable.

The Port can accommodate a certain amount of fine-grained material, regardless of its chemical composition, in its fills, but that amount is limited by the needs to ensure that the fill is structurally sound and to avoid compromising the construction schedule. Fine-grained material is structurally poor, and its incorporation into the fill generally increases costs and takes more time to dewater than the use of sandy material. Generally speaking, fine-grained material may be placed in the bottom and inner layers of the fill, but the higher the material is in the fill, the higher the sand content must be. Only a limited amount of fine-grained material can be accepted at a given point in fill construction and that amount decreases as the elevation of the fill rises.

Accordingly, the Port will evaluate proposed material to determine, based on a geotechnical analysis, if the material can be incorporated into the fill and, if so, where it must be placed.

2.4.2 Placement of Fill: Solids Management Plan

Placement of fill is not expected to have any long-term or significant impacts to water quality. During placement of dredged sediments within the fills, the Port’s contractors will be required to implement measures (see Section 3) to minimize the loss of sediment, whether contaminated or clean, from within the fill. These measures will be in effect both during the period when the dike is partially completed as well as when the dike has reached its full height with a temporary drainage weir to allow water outflow. The primary route for contaminated sediment loss from the fills is likely to be by suspension in water (i.e.,

turbidity), which could result from placing sediment, via barge or discharge pipe, too close to the dike or weir or disposing of sediment at too high a rate. Spillage or misplacement are other routes by which contaminated sediment could escape the fill containment area, and these actions will be avoided at all costs and cleaned up at the contractor's expense.

Once placement of sediment within a given fill is completed, the contractor may be required to perform a final dredge pass over the area immediately adjacent to the containment berm in order to remove any shoaled (escaped) dredged material and place it back within the fill. The Port Engineer may elect to forego this additional dredging requirement if, in the Engineer's opinion, no significant contaminated sediment has escaped the slip fill area during its filling. This determination will be based on observations via survey and water quality monitoring during the filling process.

2.5 Potential Sources of Fill

While the Port is generating fill material as part of the project, the Port will be accepting fill from outside sources to both benefit the Project and the region. The Port will evaluate every potential fill source in accordance with the priority protocol established in the Middle Harbor Sediment Management Plan. The final decision as to whether a given material can be accepted will be made on a case-by-case basis but will be based upon four criteria:

- *Schedule.* The timing of its delivery relative to the progress of fill construction.
- *Fill Composition.* The nature of the fill material, both chemical and geotechnical.
- *Documentation.* The required permits, insurance, licenses, and agreements.
- *Fill Source.* The geographic source of the material.

The interplay of those four factors will determine the priority of each potential opportunity. In each case, the Port will document the decision-making process. The Middle Harbor fills will include material from other elements of the Project, other Port dredging projects, and projects elsewhere in southern California; however, if sufficient material cannot be obtained from those sources, material will be borrowed from the Port Outer Harbor.

3 POTENTIAL PROJECT BEST MANAGEMENT PRACTICES

The activities that may adversely affect water quality include Piers E and D wharf demolition/construction, dredging of Slip 3, construction of rock dike, and construction of new land via fills. The following BMPs may be implemented to minimize the impacts of these activities:

1. Wharf demolition/construction:

- Demolition debris will be removed from waters of the state/United States daily and stockpiled until disposal.
- A solid debris curtain will be maintained in place during all demolition activities to close off the active demolition area from the surrounding waters.

2. Dredging:

- A water quality monitoring plan approved by the Regional Water Quality Control Board (RWQCB) will be implemented by the Port during dredging. This plan will describe methods and documentation for the monitoring of turbidity, pH, and dissolved oxygen during dredging.
- The contractor will be required to ensure that the scow will not be allowed to overflow.
- If increased turbidity is observed outside the allowable mixing zone at the dredge site the following specific BMPs may be implemented:
 - Increasing cycle time – To control turbidity, longer cycle time would be used to reduce the velocity of the ascending loaded bucket through the water column, which reduces potential to wash sediment from the bucket. Limiting the velocity of the descending bucket reduces the volume of sediment that is picked up and requires more total bites to remove the project material. The majority of the sediment resuspension, for a clamshell dredge, occurs when the bucket hits the bottom.
 - Eliminating multiple bites – The contractor would be prohibited from using multiple bites of the dredge's clamshell bucket until the turbidity exceedance is resolved. When the bucket hits the bottom, an impact wave of suspended sediment travels along the bottom away from the dredge bucket. When the clamshell bucket takes multiple bites, the bucket loses sediment as it is reopens for subsequent bites. Sediment is also released higher in the water column as the bucket is raised, opened, and lowered.

- Eliminating bottom stockpiling – The contractor would be forbidden to use bottom stockpiling to increase the efficiency of the dredging operation. Bottom stockpiling of the dredged sediment in silty sediment has a similar effect as multiple bite dredging; an increased volume of sediment is released into the water column from the operation.
- Silt curtain -- A silt curtain would be deployed around the dredging site if the above measures prove inadequate.

3. Placement of fill

- A water quality monitoring plan for the area outside the fill will be developed by the RWQCB, and implemented by the Port. This plan will describe methods and documentation for the monitoring of turbidity, pH, dissolved oxygen, and chemical constituents, as necessary.
- Dredged material placement will be protected from exposure to surrounding waters by the quarry rock dike. Fill will be placed landside of the dike, thus protecting surrounding waters. A Solids Waste Management Plan will be implemented to reduce potential for movement of sediment out of the fill.
- When sediment is being placed within the fills by bottom-dump barge, the barges shall be positioned at a sufficient distance inside the slip to ensure that excessive turbidity is not released beyond the slip fill limits, and that water quality requirements are not exceeded at the dike. When the dike is completed to full height, with a temporary drainage weir, the contractor shall locate and sequence sediment rehandling and discharge as to minimize loss of suspended sediments through the weir. This can be accomplished by positioning the discharge point as far as possible from the weir. As the fill area fills up, however, the discharge will have to take place closer and closer to the weir. At this stage, if the contractor is unable to prevent turbidity from escaping through the weir, then it will be necessary to install a filter fabric barrier or continuous floating silt curtain across, or just outside of, the weir outflow point to prevent the passage of suspended sediments out into the adjacent water area.
- During hydraulic placement of material, water outside of the fill will be monitored visually for increases in turbidity. Substantial visible contrast with the appearance of the surrounding water would trigger the following actions. First, hydraulic placement of material would be slowed. If this action is not sufficient, then a floating silt curtain would be placed around the discharge site to contain the turbidity plume and prevent heightened turbidity outside of the project area.

4 FEATURES OF THE WATER QUALITY CERTIFICATION/WASTE DISCHARGE REQUIREMENTS

4.1 Renewal and Revisions

In order to complete project activities in the most efficient manner possible, the Port requests that the RWQCB issue its Water Quality Certification/Waste Discharge Requirements (WQC/WDR) for a period of 5 years. If the Port significantly changes dredge volumes or project activities, the Port will consult with the RWQCB for appropriate steps to amend the WQC/WDR. In addition, because project activities are expected to take place over 10 years, the Port expects to request extensions to the WQC/WDR following the initial 5-year term.

4.2 Review of Imported Fill Material

As described above, the Project anticipates accepting material from sources outside the Port. In this application for WQC/WDR, the Port requests that the RWQCB grant its Executive Officer the authority under these WDRs to review proposed source projects and to grant or deny approval for the Port to accept the material. In making his/her determination, the Executive Officer would consider the project proposing to deliver material to the Middle Harbor fills and the nature of that material; comments from interested parties (including environmental organizations); and the extent to which the Middle Harbor site management plan and any agreements between the Port and the outside party would prevent the placement activities from degrading water quality unacceptably.

5 REFERENCE

Pacific Edge Engineering, Inc. (Pacific Edge). 2006. Subsurface Investigation Report: Port of Long Beach Pier E/Middle Harbor Redevelopment. Long Beach, California.

Weston Solutions, Inc. (Weston). 2006. Chemical and Physical Characterization of Sediments Within Slip 3 for the Pier E Redevelopment Program at the Port of Long Beach. Long Beach, California

U.S. Army Corps of Engineers and Port of Long Beach (USACE/POLB). 2009. Middle Harbor Redevelopment Project. Final EIS/EIR and Application Summary Report. SCH 2004091010

APPENDIX: MIDDLE HARBOR SEDIMENT MANAGEMENT PLAN OUTLINE

Goals for this document include:

- Guidance document for engineering and planning throughout life of project
- Disclose the Port of Long Beach's (Port's) intentions with regard to third party material
- Provide background of need for Waste Discharge Requirements (WDRs) and Contaminated Sediments Task Force (CSTF) involvement

Information to be included:

Project description

- 1.1. Describe the dredge/fill elements of the project, including the nature of the material
- 1.2. Logistical issues
 - 1.2.1. Working wharfs
 - 1.2.2. Timing of construction
- 1.3. Technical issues: Describe the necessary geotechnical characteristics of the fill the areas to receive imported fill
 - 1.3.1. Pier E Extension and Slip 1
 - 1.3.2. Designed to accommodate the largest volume of fine material
 - 1.3.3. Potential bins for material of various structural and chemical qualities
 - 1.3.4. Placement methods of material into Slip 1: hydraulic, mechanical, truck
- 1.4. Known potential sources of material
 - 1.4.1. Material generated during Phase I and Phase II of redevelopment
 - 1.4.2. Imported fill (City, County, U.S Army Corps of Engineers [USACE], other)
 - 1.4.3. Future dredging at Port
 - 1.4.4. Anchorage Road
 - 1.4.5. Western Anchorage Sediment Storage and Disposal Site
 - 1.4.6. Outer Harbor sand borrow
- 1.5. Discuss potential impacts related to contaminated sediments exposed to water (although contained by dike) for long periods of time

2. Imported Fill

- 2.1. State Port's intent to accept third party material, as feasible, in order to benefit the region
- 2.2. Describe the terms for acceptance of third party material; must meet all specific logistical and technical requirements, for example:
 - 2.2.1. Project funded
 - 2.2.2. Project permitted (Project-specific WDRs must acknowledge that placement will be dictated by WDRs for Slip 1)
 - 2.2.3. Technically suitable
 - Grain size appropriate for need
 - Contaminant constraints: no hazardous material, no material subject to Department of Toxic Substances Control/U.S. Environmental Protection Agency (DTSC/USEPA) requirements for long-term monitoring
 - 2.2.4. Timing of project consistent with need
 - 2.2.5. Meet Port insurance requirements
 - 2.5.6 Signed Memorandum of Understanding

3. Projects found to be acceptable prioritized according to the following:

- 3.1. Within Port
 - 3.1.1. Mandated Remediation
 - 3.1.2 Capital
 - 3.1.3. Maintenance
 - 3.1.4. Other Remediation
- 3.2. Within the City of Long Beach
- 3.3. Port of Los Angeles Remediation Projects
- 3.4. POLB Western Anchorage
- 3.5. Within LA County In Accordance With CSTF Guidance
- 3.6 Outside LA County (e.g., Ventura, Orange counties)
- 3.7 POLB Sand Borrow